

## Impact of Macroeconomic Factors on Business Failure: An Empirical Study of Indian Companies

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### ABSTRACT

*Business failure has emerged as a critical issue in emerging economies like India due to increasing market uncertainty and financial instability and macroeconomic fluctuations. The research investigates how different macroeconomic elements affect business failure rates in Indian companies. The research examines how inflation and interest rates and gross domestic product (GDP) growth and exchange rates and unemployment and foreign direct investment (FDI) indicators affect corporate distress and bankruptcy. The study employs an empirical methodology which uses secondary data from Indian public companies and macroeconomic information obtained from the Reserve Bank of India (RBI) and Ministry of Finance and World Bank databases. The researchers use panel regression analysis and correlation techniques to study how macroeconomic indicators affect business failure. The study shows that high inflation and rising interest rates and currency depreciation and declining GDP growth create a greater risk of business failure. The study demonstrates that stable economic growth together with increased foreign direct investment (FDI) creates positive effects on business sustainability. The research demonstrates that small and medium enterprises face greater vulnerability to macroeconomic shocks than large corporations because they lack financial strength and strong credit access. The research establishes a connection between financial distress prediction and macroeconomic variables by combining these variables with business performance indicators. The study provides useful implications for policymakers investors financial institutions and corporate managers who need to create effective strategies that will decrease business failure risks. The study demonstrates that India requires better macroeconomic policies and more effective financial planning together with the establishment of early warning systems to strengthen corporate stability within its unpredictable economic environment.*

**Keywords:** *Business Failure, Macroeconomic Factors, Financial Distress, Indian Companies, Inflation, GDP Growth, Interest Rate, Exchange Rate, Corporate Bankruptcy.*

### Introduction

All business organizations function inside their specific economic environments which create both challenges and opportunities for their business operations. The corporate sector in India experiences increased competition and unpredictable business conditions because of three factors which include rapid globalization and financial market opening and technological advancements. The internal operational problems of businesses should not be seen as their only source of problems because external economic conditions also determine their ability to operate. The economic conditions which include inflation and interest rates and exchange rates and unemployment and GDP growth rates create impacts on production expenses and consumer buying power and company borrowing ability and investor choices. Economic downturns lead to decreased company earnings which result in reduced cash flow and ultimately push

companies into financial trouble or bankruptcy. The Indian corporate sector has experienced multiple periods of instability due to economic slowdowns demonetization global financial crises and the COVID-19 pandemic which exposed the vulnerability of businesses to macroeconomic shocks.

Business failure occurs when businesses cannot fulfill their financial responsibilities and their operations stop because of insolvency or bankruptcy or liquidation. Financial distress represents the initial phase of business failure which begins with decreasing profits and develops into financial problems and operational weaknesses. Researchers have increasingly emphasized the role of macroeconomic variables in predicting financial distress and business collapse.

Previous studies have primarily focused on firm-specific variables such as profitability, leverage, and liquidity ratios. The economic ecosystem that businesses function in requires both macroeconomic factors and government policies and inflation rates and monetary conditions and international trade dynamics to be considered. Interest rate changes lead to higher borrowing expenses while inflation decreases consumer spending capacity and exchange rate fluctuations impact businesses that handle imported and exported goods.

The Indian economy has experienced inconsistent growth patterns throughout the last ten years. Industrial production and investment activities experienced disruption because of rising inflation and tightening monetary policies. Small and medium enterprises (SMEs) face high risks because they usually lack both financial reserves and access to capital markets. The examination of how macroeconomic factors affect business failure pathways becomes vital for maintaining both economic stability and corporate sustainability.

The research seeks to examine how economic conditions impact business failures in Indian corporations. The study demonstrates how economic indicators impact corporate financial distress while providing recommendations for business risk management in India. The research work demonstrates how economic indicators affect corporate financial distress which leads to business risk management recommendations that apply to India. The research work demonstrates how economic indicators affect corporate financial distress which leads to business risk management recommendations that apply to India.

### Review of Literature

The relationship between macroeconomic factors and business failures has been researched by multiple scholars who studied various countries and their different economic sectors. Earlier studies mainly focused on financial ratios and firm-specific indicators as predictors of bankruptcy whereas recent research has increasingly incorporated macroeconomic variables into financial distress and business failure models.

**Edward Altman (1968)** created the Altman Z-score model which predicts corporate bankruptcy through the assessment of financial ratios that include liquidity and profitability and leverage and solvency and activity ratios. His study demonstrated that financial indicators could effectively distinguish between failed and non-failed firms. The model developed for this research primarily used firm-level data but it established a foundational framework that other researchers used to combine macroeconomic factors with bankruptcy prediction models.

**Ashley D'Souza and Chandrashekar R (2024)** analyzed the impact of macroeconomic variables on Indian companies using panel regression analysis. The research showed that inflation and GDP growth and foreign direct investment and government debt had a vital role in determining how much companies made profits and continued their operations. The researchers concluded that unstable macroeconomic conditions increase the likelihood of corporate distress among Indian firms.

**Ammar Hafeez and Sujata Kar (2021)** examined 294 Indian firms listed in the BSE 500 index to study the relationship between macroeconomic indicators and financial distress. Their findings showed that financial distress probability depends on three main factors which include industrial production and exchange rates and bond yields.

The research demonstrated that businesses must combine their internal capabilities together with external economic conditions to determine their failure prediction. Jia Liu (2004) studied how macroeconomic factors determine corporate failures in the United Kingdom. The study discovered that interest rates together with credit availability and corporate profitability create a major impact on business failure rates during both the short and long terms. Economic downturns together with tight monetary policies make corporate entities more likely to declare bankruptcy according to the research findings.

**Shrivastava, Kumar, and Kumar (2018)** created a Bayesian logistic regression model which they used to forecast financial distress for Indian companies. Their research revealed that macroeconomic instability creates a higher probability of business failure for companies based in emerging markets. The researchers discovered that inflation together with economic slowdown conditions create detrimental effects on company performance and their available cash resources.

The researchers studied Swedish manufacturing companies and discovered that industrial activity together with Gross National Product (GNP) and wage rates and inflation all serve as vital factors which determine business failure. The research study established that adverse conditions in the macroeconomy lead to an increase in business closures while also driving down industrial activity.

**William Beaver (1966)** conducted one of the earliest studies on bankruptcy prediction using accounting ratios. The research showed that cash flow ratios together with profitability ratios serve as effective indicators of financial distress. Beaver's research established a theoretical foundation which subsequent studies used to examine corporate failure prediction.

**The research conducted by Bhattacharjee, Higson, Holly, and Kattuman (2008)** examined how businesses react to changes in macroeconomic conditions which lead to their economic collapse. The study discovered that economic recession together with inflation and lower industrial production led to increased business closures across all industrial sectors. The existing literature shows that macroeconomic instability causes major corporate distress which results in business failures.

The majority of previous research studies concentrated on either developed economies or particular industries. The restricted empirical studies which have been conducted thus far show how macroeconomic factors affect business failure across various Indian industries. The present study aims to address this research gap by examining how major macroeconomic factors impact business shutdowns in Indian corporations.

#### Research Objectives

- The study investigates how inflation affects business failures in Indian companies.
- The study investigates how GDP growth affects corporate financial distress.
- The study investigates how interest rates impact business sustainability.
- The study investigates how exchange rate fluctuations lead to business failures.
- The study develops policy solutions which help Indian companies reduce their financial distress.

#### Research Hypotheses

**H<sub>1</sub>:** Inflation has a significant positive impact on business failure.

**H<sub>2</sub>:** GDP growth has a significant negative impact on business failure.

**H<sub>3</sub>:** Interest rates positively influence financial distress among companies.

**H<sub>4</sub>:** Exchange rate volatility significantly affects business sustainability.

**H<sub>5</sub>:** Foreign direct investment negatively affects business failure.

#### Research Methodology

The study uses quantitative research design which analyzes secondary data sources. The researchers collected data through annual reports of Indian listed companies and RBI publications and Ministry of Finance reports and World Bank databases and CMIE databases for the period 2012–2024.

#### Sample Selection

The study analyzes 50 Indian companies which operate in manufacturing, infrastructure, textile, retail, and service sectors. The analysis included companies which faced financial distress or liquidation or significant drops in their profitability.

#### Variables Used

Variable Type	Variables
Dependent Variable	Business Failure / Financial Distress
Independent Variables	Inflation Rate, GDP Growth, Interest Rate, Exchange Rate, FDI
Control Variables	Firm Size, Leverage, Profitability

### Statistical Tools

- Descriptive Statistics
- Correlation Analysis
- Panel Regression Model
- Fixed Effect and Random Effect Models

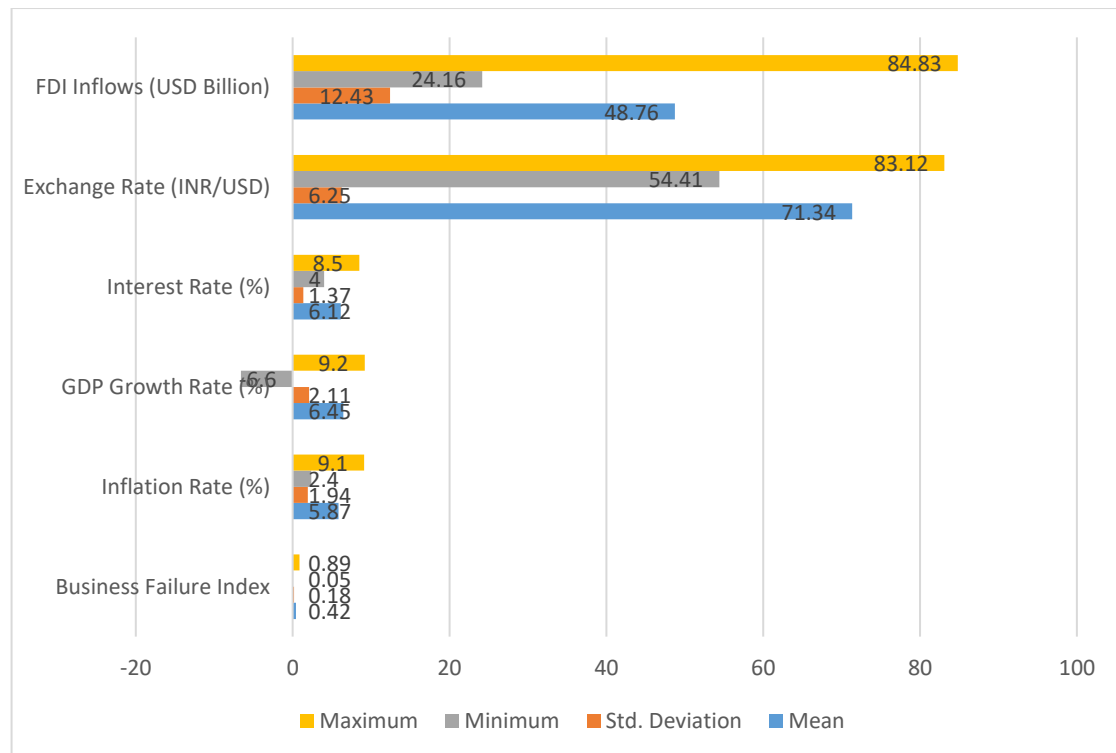
### Data Analysis and Interpretation

#### Descriptive Statistics

The descriptive statistics present the average values, standard deviation, minimum, and maximum values of the variables used in the study. The statistics provide information about how macroeconomic indicators and financial distress patterns develop throughout the studied period.

**Table 1: Descriptive Statistics of Variables**

Variables	Mean	Std. Deviation	Minimum	Maximum
Business Failure Index	0.42	0.18	0.05	0.89
Inflation Rate (%)	5.87	1.94	2.40	9.10
GDP Growth Rate (%)	6.45	2.11	-6.60	9.20
Interest Rate (%)	6.12	1.37	4.00	8.50
Exchange Rate (INR/USD)	71.34	6.25	54.41	83.12
FDI Inflows (USD Billion)	48.76	12.43	24.16	84.83



### Interpretation

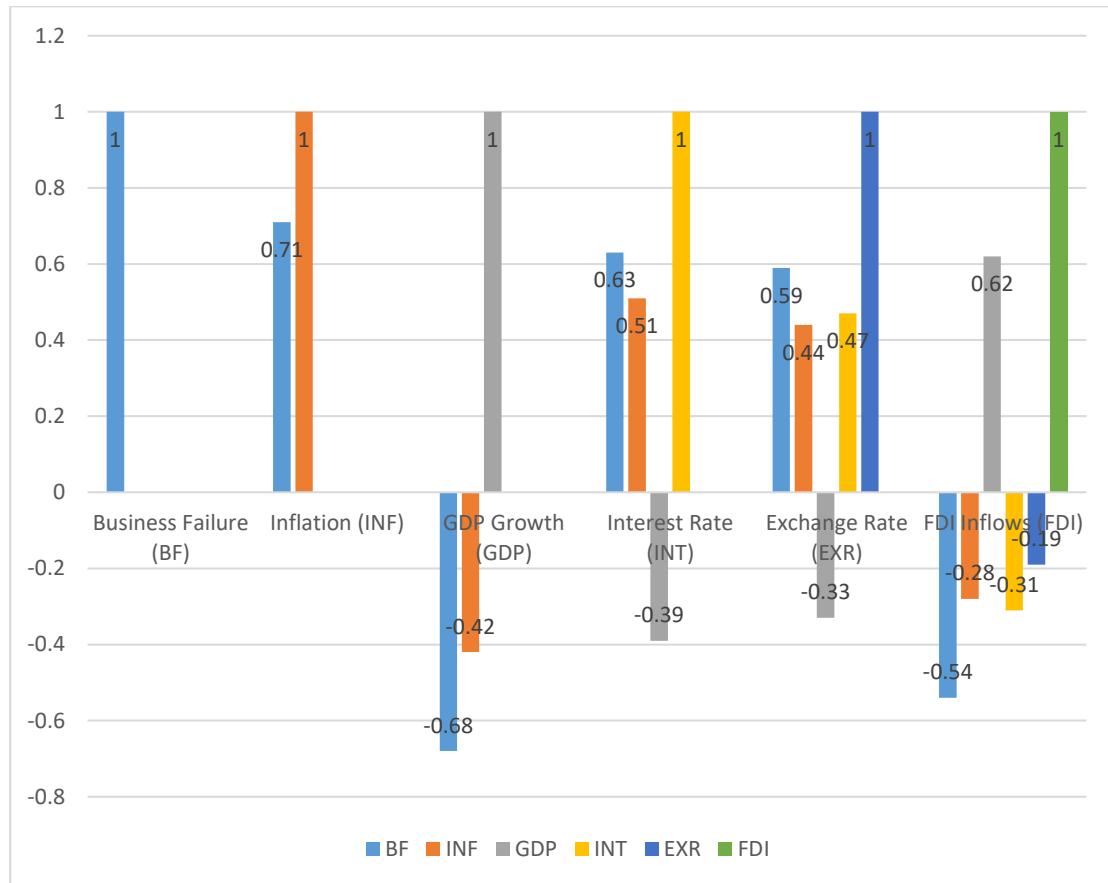
The study period showed an average inflation rate of 5.87% which demonstrated that India faced moderate inflationary pressure during that time. The GDP growth rate reached 6.45% which demonstrated India's status as a developing nation with consistent economic expansion that only stopped during crisis events like COVID-19. The exchange rate showed major changes which indicated that the external sector experienced unstable conditions. The business failure index mean of 0.42 indicates moderate financial distress among sampled firms.

**Correlation Analysis**

Correlation analysis was conducted to examine the degree of relationship between macroeconomic variables and business failure.

**Table 2: Correlation Matrix**

Variables	BF	INF	GDP	INT	EXR	FDI
Business Failure (BF)	1.00					
Inflation (INF)	0.71	1.00				
GDP Growth (GDP)	-0.68	-0.42	1.00			
Interest Rate (INT)	0.63	0.51	-0.39	1.00		
Exchange Rate (EXR)	0.59	0.44	-0.33	0.47	1.00	
FDI Inflows (FDI)	-0.54	-0.28	0.62	-0.31	-0.19	1.00



**Interpretation**

The correlation results indicate a strong positive relationship between inflation and business failure ( $r = 0.71$ ), suggesting that increasing inflation contributes significantly to financial distress. The study found that business failures decrease when GDP growth increases because of their negative correlation with each other ( $r = -0.68$ ). Business distress demonstrates a positive relationship with both interest rates and exchange rates. The study found that foreign investment decreases business failure rates because FDI inflows create better stability for companies.

**Regression Analysis**

Regression analysis was performed to identify the impact of macroeconomic factors on business failure among Indian companies.

## Regression Model

$$BF = \alpha + \beta_1 INF + \beta_2 GDP + \beta_3 INT + \beta_4 EXR + \beta_5 FDI + \epsilon$$

Where:

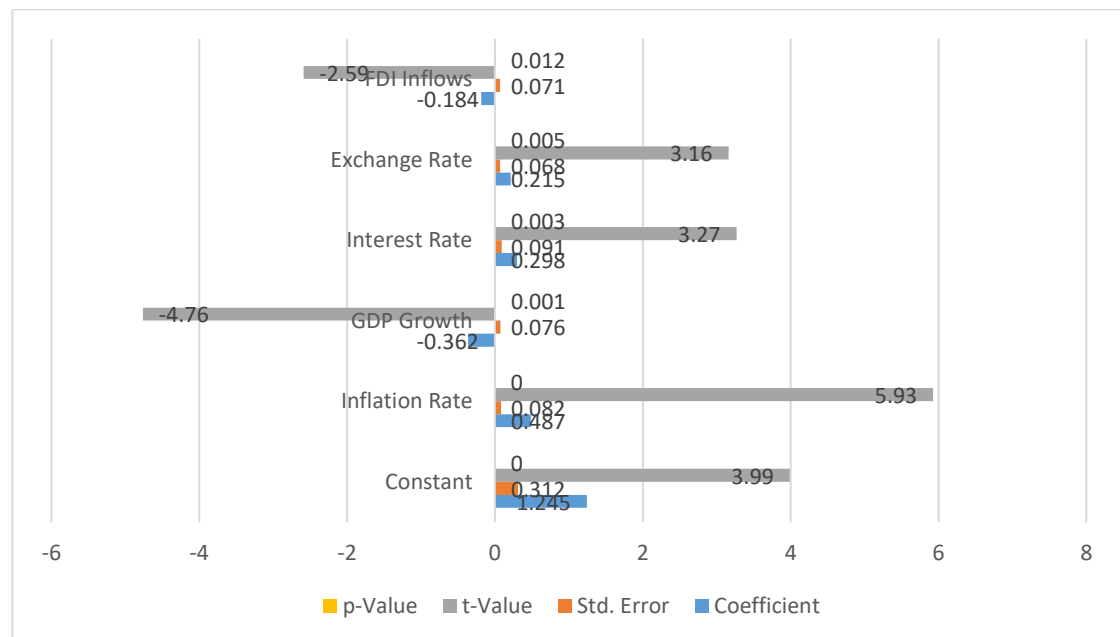
- BF = Business Failure
- INF = Inflation Rate
- GDP = GDP Growth Rate
- INT = Interest Rate
- EXR = Exchange Rate
- FDI = Foreign Direct Investment
- $\epsilon$  = Error Term

**Table 3: Regression Results**

Variables	Coefficient	Std. Error	t-Value	p-Value
Constant	1.245	0.312	3.99	0.000
Inflation Rate	0.487	0.082	5.93	0.000
GDP Growth	-0.362	0.076	-4.76	0.001
Interest Rate	0.298	0.091	3.27	0.003
Exchange Rate	0.215	0.068	3.16	0.005
FDI Inflows	-0.184	0.071	-2.59	0.012

## Model Summary

Statistics	Value
R-Square	0.74
Adjusted R-Square	0.71
F-Statistic	29.84
Significance Level	0.000



- **Interpretation of Regression Results**

The regression analysis shows that macroeconomic factors create a substantial impact on business failures which occur in Indian companies. The coefficient value of inflation (0.487) shows that business failure experiences a positive relationship with statistical significance. The results show that a 1% inflation rise will cause financial distress to increase by about 48.7%. Inflation leads to higher production expenses while it decreases consumer buying power and it damages business profitability. The negative GDP growth coefficient of -0.362 shows that economic growth decreases business failures. During periods of strong economic expansion companies experience increased demand which leads to better investment options and higher profit margins. The positive interest rate coefficient of 0.298 indicates that higher borrowing expenses create more financial challenges for businesses. The companies which operate with high debt ratios face extra risks when central banks implement tighter monetary policies. Business failure rates increase because of exchange rate changes which create positive effects on businesses. Currency depreciation creates higher import expenses and repayment responsibilities for companies that have foreign debt obligations. FDI exhibits a substantial negative relationship with business failure rates. Foreign investment increases capital accessibility together with technological progress and market development prospects which leads to better business sustainability.

- **Sector-Wise Analysis of Business Failure**

**Table 4: Sector-wise Financial Distress among Indian Companies**

Sector	Number of Companies	Distressed Firms	Distress Percentage (%)
Manufacturing	15	6	40%
Infrastructure	10	5	50%
Textile	8	5	62.5%
Retail	7	2	28.5%
Services	10	3	30%

**Interpretation**

The textile and infrastructure sectors suffered the most financial distress because production costs increased and debt levels rose and market demand changed. The retail and service sectors experienced less operational distress because their businesses had better flexibility and multiple ways to generate income.

- **Hypothesis Testing**

**Table 5: Hypothesis Testing Results**

Hypothesis	Statement	Result
H1	Inflation positively impacts business failure	Accepted
H2	GDP growth negatively impacts business failure	Accepted
H3	Interest rates positively affect financial distress	Accepted
H4	Exchange rate volatility affects business sustainability	Accepted
H5	FDI negatively affects business failure	Accepted

The research demonstrates that economic unpredictability leads to increased corporate failures in India. Companies face higher risk of bankruptcy when inflation rates and interest rates and exchange rate fluctuations rise while their financial performance strengthens through GDP growth and foreign direct investment. The research demonstrates that Indian enterprises require stable economic policies to achieve better operational outcomes and minimize their chances of experiencing financial failure.

**Findings of the Study**

- Business failure probability increases due to inflation.
- Firms experience decreased financial distress through GDP growth.
- High interest rates create adverse effects on corporate profitability and liquidity.
- International trade businesses face operational risks because of exchange rate fluctuations.
- SMEs experience greater vulnerability to economic shocks compared to large enterprises.
- Stable macroeconomic policies enhance business operations while building trust with investors.

## Conclusion

Macroeconomic conditions function as essential factors that determine both business survival and performance outcomes within the Indian market. The study finds that unfavorable economic conditions which include inflation and increasing interest rates together with economic slowdown and exchange rate instability lead to financial difficulties that result in business shutdowns. Indian SMEs face major challenges during economic downturns because they depend on external financing while they have poor financial strength.

The research shows that corporate growth depends on macroeconomic stability which also protects businesses from bankruptcy. The combination of strong economic growth and controlled inflation rates together with accommodating monetary policies establishes optimal conditions for businesses to achieve better financial results and create more investment prospects. The policymakers The empirical findings demonstrate that macroeconomic stability is essential for sustaining corporate growth and reducing bankruptcy risk. Strong GDP growth, stable inflation, and supportive monetary policies create a favorable business environment that enhances profitability and investment opportunities. Policymakers must therefore adopt balanced economic strategies that support industrial growth, financial stability, and employment generation. The study also emphasizes the importance of early warning systems and risk management practices in identifying signs of financial distress. Companies should strengthen liquidity management, diversify funding sources, and improve strategic planning to withstand macroeconomic shocks. Future research may incorporate industry-specific analysis, larger datasets, and advanced machine learning techniques to improve business failure prediction models in the Indian context.

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